

AMENDMENT TO THE CLAIMS

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (currently amended): ~~In a servo control loop, a~~ method of compensating large, repeatable runout (RRO) caused by ~~eccentricity between pre-written servo tracks on a disc and a path followed by a head that is concentric with an axis of rotation of the disc, the method comprising steps of:~~

- (a) ~~forming a compensation equations representing the repeatable runout (RRO) for a plurality of discs; and using the compensation equations to control heads corresponding to the discs to follow virtual tracks that are substantially concentric to an axis of rotation of the corresponding disc.~~
- (b) ~~generating a compensation signal based upon the compensation equation; and~~
- (c) ~~injecting the compensation signal into the servo control loop to cancel the RRO and cause the head to follow a virtual track that is concentric to the axis of rotation of the disc.~~

7. (currently amended): The method of claim 6, wherein the forming step (a) comprises:

- ~~(a) (1)~~ — positioning the a head at a fixed radial position relative to the axis of rotation of the corresponding disc;
- ~~(a) (2)~~ — measuring a position error signal (PES) corresponding to a difference between a head position signal ~~relating and~~ a reference signal, ~~wherein the PES relates to the RRO;~~
- ~~(a) (3)~~ — setting compensation values in accordance with the PES; ~~and~~
- ~~(a) (4)~~ — forming the compensation equation for the disc using the compensation values; and
repeating steps (a) (1) through (a) (4) for each disc.

8. (original): The method of claim 7, wherein the compensation values relate to discrete radial position differences between the position of the head and the reference track as measured at each servo track.

9. (currently amended): The method of claim 6, further comprising:

- ~~(d)~~ ~~repeating steps (a), (b) and (c) for each disc in a disc drive, wherein a compensation equation is formed for each head of the disc drive corresponding to the discs;~~
- ~~(e)~~ measuring a reference position of each head while maintaining the heads in fixed relation to each other; and
- ~~(f)~~ establishing a reference virtual track at each of the reference positions, ~~whereby the disc drive can operate in a cylinder mode.~~

10. (canceled)

11. (currently amended) In an apparatus having a storage medium that includes position information that defines real tracks of the storage medium that are eccentric to an axis of rotation of the storage medium, and a transducer that is positionable relative to the storage medium, a method of operating the apparatus comprising a step of controlling a position of the transducer to follow virtual tracks that are substantially concentric to the axis of rotation of the ~~disc~~ storage medium and are eccentric to the real tracks.

12. (previously presented) The method of claim 11 including reading data from the virtual tracks with the transducer.

13. (previously presented) The method of claim 11 including a step of writing data to the virtual tracks with the transducer.

14. (currently amended) The method of claim 11, wherein the controlling step includes:

removing a repeatable runout (RRO) component from a position error signal (PES), the RRO component representing the eccentricity between the real data tracks and the axis of rotation of the storage medium ~~discs~~;

generating a control signal in response to the PES; and
controlling the position of the transducer in response to the control signal.

15. (previously presented) A disc drive or spin-stand comprising:
a disc having servo tracks containing position information that define data tracks that are eccentric to an axis of rotation of the disc;

a transducer configured to produce an output signal in response to the servo tracks; and

an element having an output lead and a control signal

provided on the output lead, the control signal controlling a position of the transducer such that the transducer follows virtual tracks that are eccentric to the data tracks and substantially concentric to the axis of rotation of the disc.

16. (new) The method of claim 6, wherein the plurality of discs are contained in a disc drive.

17. (new) The method of claim 6, including generating compensation signals based upon the compensation equations.

18. (new) The method of claim 17, including selectively injecting the compensation signals into a servo control loop to cancel the RRO of the discs and cause corresponding heads to follow virtual tracks that are concentric to the axis of rotation of the discs.

19. (new): A device comprising:

- a plurality of discs each having servo tracks that define data tracks that are eccentric to an axis of rotation;
- a plurality of transducers each configured to produce an output signal in response to the servo tracks of a corresponding disc;
- a plurality of compensation equations each representing repeatable runout (RRO) of one of the discs caused by eccentricity between the servo tracks and an axis of rotation of the disc; and
- a servo control loop configured to control a position of each transducer to follow virtual tracks that are substantially concentric to the axis of rotation of the corresponding disc using the corresponding compensation equation.

20. (new) The device of claim 19, wherein the device forms a disc drive.

21. (new) The device of claim 19, wherein the device forms a spin stand.
